WATER RESOURCES DIVISION

PHOTO BY DAVE AMMAN

WATER RESOURCES DIVISION

Providing the most benefit, through the best use, of the state's water resources for the people of Montana.

The Montana Constitution affirms that the state's water resources are owned by the State of Montana and are to be used by its people. DNRC has the statutory responsibility to ensure that the state's water resources are managed to meet the existing and future needs of its citizens.

The Water Resources Division (WRD) is comprised of four bureaus — the State Water Projects, Water Management, Water Operations, and Water Rights Bureaus — and eight regional offices. The division employs approximately 115 persons, with staff members stationed in Helena's central office and in the regional offices in Billings, Bozeman, Glasgow, Havre, Helena, Kalispell, Lewistown, and Missoula.

Further information about the division and Montana water resources can be found on the division's website at:

www.dnrc.state.mt.us/wrd/home.htm

State Water Projects

The State Water Projects Bureau administers the operation, management, and rehabilitation of the state-owned dams, canals, and hydropower projects listed in Tables 30 and 31; DNRC also owns these facilities. DNRC also provides professional engineering and rehabilitation assistance on the projects listed in Table 32, which are owned by Department of Fish, Wildlife and Parks (DFWP). Local water user associations that market the water for irrigation and other purposes operate most of the projects. Debt repayment is derived from repayment contracts with water users and from leases of lands associated with the projects (see Table 33). The bureau ensures that the projects are operated and maintained in a safe, efficient manner and that repayment contracts are properly administered.

Table 30
Dams Managed by the State Water Projects Bureau
and Owned by DNRC

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ackley Lake	1938	5,975	Yes	Yes	Yes	Judith Basin
Bair	1939	7,029	Yes	Yes	Yes	Meagher
Broadwater-Missouri (Toston)	1940	3,000	Yes	No	Yes	Broadwater
Cataract	1959	1,478	Yes	Yes	Yes	Madison
Cooney	1937	28,140	Yes	Yes	Yes	Carbon
Cottonwood	1953	1,900	Yes	Yes	Yes	Park

1. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

(Continued on page 106)

Table 30
Dams Managed by the State Water Projects Bureau
and Owned by DNRC
(Continued from page 105)

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Deadman's Basin Dam and Dike	1941	76,900	Yes	Yes	Yes	Wheatland
East Fork of Rock Creek (Flint Creek)	1938	16,040	Yes	No	Yes	Granite
Fred Burr	1948	516	No	No	Yes	Ravalli
Frenchman	1952	3,752	No	No	Yes	Phillips
Glacier (two dams)	1937	4,200	Yes	No	Yes	Carbon
Martinsdale (two dams)	1939	23,080	Yes	Yes	Yes	Wheatland
Middle Creek (Hyalite)	1951	10,184	Yes	Yes	Yes	Gallatin
Nevada Creek	1938	12,640	Yes	Yes	Yes	Powell
Nilan (two dams)	1951	10,092	Yes	Yes	Yes	Lewis and Clark
North Fork Smith River	1936	11,500	Yes	Yes	Yes	Meagher
Painted Rocks	1940	32,362	Yes	Yes	Yes	Ravalli
Ruby	1939	38,850	Yes	Yes	Yes	Madison
Tongue	1939	79,071	Yes	Yes	Yes	Big Horn
Willow Creek	1938	18,000	Yes	Yes	Yes	Madison
Yellowater Dam and Dike	1938	3,840	Yes	Yes	Yes	Petroleum

1. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

TABLE 31
Canals Managed by the State Water
Projects Bureau and Owned by DNRC

Project	Canal	Length (miles)	Capacity (cfs)
Ackley Lake	Supply	6.7	100
	Outlet	4.7	62
Broadwater-Missouri (Toston)	Main	1.5	342
	West	12.4	90
	East	34.3	262
Deadman's Basin	Supply	11.5	700
	Careless Creek	9.5	344
	Barber	2.9	200
East Fork of Rock Creek (Flint Creek)	Main	7.7	200
	East	5.8	63
	Marshall	16.0	56
	Allendale	13.0	125
	Metcalf	4.1	17

(Continued on page 107)

TABLE 31
Canals Managed by the State Water
Projects Bureau and Owned by DNRC
(Continued from page 106)

Project	Canal	Length (miles)	Capacity (cfs)
Little Dry	Little Dry	11.6	90
Middle Creek (Hyalite)	Cottonwood	4.1	77
Nevada Creek	Douglas	12.6	50
	North	13.4	49
Nilan	Supply	5.5	300
Rock Creek	Point of Rocks	2.3	50
	Finn	9.0	25
	Cottonwood	2.0	25
	Pryde	8.0	40
Upper Musselshell	Checkerboard	2.9	38
	North Fork Diversion	11.7	105
	Martinsdale Supply	2.4	408
	Martinsdale Outlet	2.6	333
	Two Dot	32.1	122

Table 32
DFWP Projects with Engineering Services
Provided by the State Water Projects Bureau

Reservoir	Year Completed	Storage (acre-ft.)	High Hazard[1]	Operation and Maintenance Manual in Place	Emergency Action Plan in Place	County
Ashley Lake	Unknown	20,400	No	No	Yes	Flathead
Bearpaw	1958	535	Yes	Yes	Yes	Hill
Clearwater Fish Barrier (Lake Inez)	1963	>50	No	No	No	Missoula
Gartside	1962	326	Yes	Yes	Yes	Richland
Johnson	1930s	208	No	No	Yes	Hill
Knowlton	1890	166	No	No	Yes	Teton
Park Lake	1872	225	Yes	Yes	Yes	Jefferson
Rainy Lake Fish Barrier	Unknown	>50	No	No	No	Missoula
South Sandstone	1975	940	No	No	Yes	Fallon
Whitetail	1930s	198	No	No	Yes	Daniels

1. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam.

Table 33
Leases Associated with DNRC-Owned Water Projects

Lease Type	Number of Leases	Annual Revenues
Cabinsite	26	$4,530
Grazing	5	4,630
Right-of-Way	1	42
TOTALS	32	$9,202

Project Rehabilitation

The Project Rehabilitation Program identifies and corrects safety and operational deficiencies on state-owned projects. Projects rehabilitated or partially rehabilitated during FY 2003 include Bair Dam located near Checkerboard, Montana; Painted Rocks Dam located near Conner, Montana; and Nevada Creek Dam located near Helmville, Montana.

Bair Dam Rehabilitation Project

DNRC contracted the final design for this rehabilitation project. A two-phased approach was used for construction. Both phases are now complete. Phase I included excavation, drains, a new outlet terminal structure, and a toe berm. Phase II included a new concrete spillway, access roads, and a 3-foot embankment raise. Bair Dam Phase II was delayed by a slope failure above the spillway, for which remediation construction has been completed. Phase II was completed in December 2002.

Nevada Creek Rehabilitation Project

DNRC contracted the final design for this rehabilitation project. A phased approach is being used for construction. Phases I and II have been designed, and Phase I was completed in December 2002. Construction included an outlet extension, materials processing, toe berm, drain system, and dewatering wells. Phase II, the new concrete spillway, is under contract and is scheduled for completion by December 2003. Construction costs for the new spillway are approximately $1.6 million.

Painted Rocks Dam

Miscellaneous concrete repairs were made to the spillway at Painted Rocks Dam. Concrete repairs are routinely made to several of our projects in order to forestall the need for major rehabilitation. Cost of the concrete repairs was approximately $25,000.

Seepage Monitoring

Seepage monitoring is required as a condition of the operating permits for all of the regulated high hazard dams in Montana. A *high hazard* dam is one whose failure would endanger lives. This classification is not a reflection on the actual condition of the dam. Of DNRC's 21 projects, 19 are classified as high hazard (see Table 30).

The seepage monitoring data collected on DNRC's projects are maintained in "DamSmart." DamSmart is a computer database that allows monitoring well data to be recorded, graphed, and compared with reservoir levels, weir and flume flows, and water conditions around the dam. These data are used in conjunction with annual inspections and monthly reviews.

The bureau received a Renewable Resource Grant to establish seepage-monitoring programs at four additional DNRC dams: Cataract, Painted Rocks, Willow Creek, and Yellowater. These four dams currently have minimal monitoring capabilities. The Willow Creek Dam instrumentation will be completed during fall 2003. The other projects are scheduled for fall 2004.

Project Management

The Project Management Program administers the operation of the state-owned dams and oversees the repayment contracts with the water user associations. Additionally, the program protects water rights for the projects and oversees disposal of projects no longer appropriate for state ownership.

Project Disposition

Many years ago, the State of Montana became involved in various water conservation projects because there was a need for government to create employment opportunities and stabilize the agricultural economy. Governmental involvement in these projects no longer provides public benefits, and the projects are being transferred to water districts and private ownership. The following activities were accomplished during FY 2003.

- The transfer of the Flint Creek project is in progress and nearing completion.
- The Noxon municipal water supply and the Hotchkiss irrigation projects were transferred to private ownership.
- A field inspection and an economic analysis of the grazing lease were performed on the Valentine project. An easement from the local school district is being sought. The Valentine project will continue to be leased for grazing.
- Field work, an engineering report, and preliminary negotiations are being conducted on the Bainville flood control project and the Big Lake project.
- Preliminary file reviews, financial status determinations, title searches, and field reviews are scheduled on the Sehm, Pardis, Wold, Red Butte, and Deer Creek properties.

Canal Operations

The Canal Operations Program is responsible for identifying and correcting operational deficiencies of state-owned canals. The following activities were accomplished in FY 2003, in addition to routine repairs and inspections.

- An emergency repair of the Flint Creek project's Marshall Canal siphon was undertaken. The existing siphon, a 60-year-old, 36-inch by 600-foot steel pipe, was severely corroded and leaked copiously. It was replaced with a 30-inch, high density polyethylene (HDPE) pipe.

- The south flume of the Middle Creek project's Cottonwood Canal was rehabilitated. Three hundred feet of the 18-gauge sheet-metal chute was replaced with new, galvanized sheet metal.

- Preparatory work was initiated to improve the Nilan Reservoir supply canal. Approximately 4 miles of the canal will be lined in order to reduce seepage and improve flow.

- An investigation and assessment were performed of the collapsing stilling basin on the Upper Musselshell project. Drop #2 of the Martinsdale outlet canal was inspected, and a preliminary cost estimate for the repair of the structure was executed. The stilling basin will be rehabilitated during FY 2004.

- The mapping and geographic information system (GIS) inventory of DNRC canals continue as an ongoing process.

Water Measurement and Water Rights Activities

The State Water Projects Bureau is responsible for all activities necessary to protect and maintain the water rights for all state-owned water projects.

In FY 2003, the bureau collected and recorded bimonthly reservoir storage data for 18 state-owned reservoir projects, and it operated and maintained 32 permanent stream- and canal-gaging stations associated with state projects.

Additionally, the bureau measured streamflows and maintained rating tables for staff gages on the four major tributaries immediately above Painted Rocks Reservoir. These gages are used to provide inflow data for use in implementing the *Operating Plan for Painted Rocks Reservoir*, which was first developed and implemented in FY 1999. This data collection included tabulating and recording annual discharge summaries for all stations for FY 2003.

In 1996, the State Water Projects Bureau asked the Montana Water Court to clarify its project water rights by consolidating its claims, which were originally filed for five uses (storage, irrigation, stock, domestic, and municipal), into claims for "Sale of Water" for those same purposes. The proposed clarification of purposes would allow the place of use for the water to be described in more general terms, that is, by township, range, and county only. The proposed consolidation and clarification of DNRC claims would not change the historical purpose of water use from the state projects, but only more accurately and concisely reflect that historical use. On May 12, 2000, the Montana Water Court granted all of the DNRC requests under an Order Adopting Master's Report in Case No. 76HE-166. This order also amended the DNRC water rights for the Painted Rocks Project accordingly.

In FY 2003, the State Water Projects Bureau continued settlement negotiations to resolve objections and amendments to its project water rights in seven basins to

incorporate the results of the above Water Court decision. Settlement documents have been filed with the Montana Water Court for five of those basins and are pending Water Court action. Settlement negotiations are continuing smoothly with the preparation of a stipulation for the other two basins.

The bureau is responsible for all water measurement and water right activities associated with state-owned projects. These activities include the monthly collecting, reporting, and summarizing of reservoir storage data for 18 state-owned reservoir projects, and operating and maintaining 36 stream-gaging stations. This data collection includes tabulating and recording annual discharge summaries for the 36 gaging stations. Research and technical support and assistance are provided to legal staff for resolving all water right issues on the projects. Most water right work involves settlement of objections to project water rights currently before the Montana Water Court in the ongoing statewide adjudication proceedings. Operating plans for water delivery are developed, and water use or other related land use problems on the projects are solved.

Administration of Project Lands and Leases

DNRC owns land surrounding state-owned reservoirs, supply canals, and water delivery canals. DNRC also assists DFWP in the operation and maintenance of 10 dams owned by DFWP. These lands are unique and are administered under a special set of statutes.

Noxious weed control is an ongoing problem at almost all of the department's projects. The six-year Noxious Weed Plans, which were developed in FY 1997, are currently being updated and renewed. All weed control costs are borne by the water user associations.

Hydropower

The Hydropower Program administers the development and operation of hydropower facilities on state-owned water projects. To date, one hydropower facility, the Broadwater Power Project near Toston, has been built. With a maximum capacity of 10 megawatts, the project began generating power in June 1989. DNRC owns and operates the facility and contracts with NorthWestern Energy to sell the energy.

Earned revenues are used to pay for rehabilitating other state-owned water projects. The main purpose of these funds is to help in the maintenance and repair of state-owned water projects, which include 19 designated high hazard dams and 250 miles of irrigation canals. Most of these large projects were completed in the 1930s and 1940s and have significant needs. In a 1980 U.S. Army Corps of Engineers' statewide inspection, many of these dams were classified as unsafe due to spillway capacities that are inadequate, according to federal guidelines.

In an average year (assuming mean runoff), the facility is capable of generating roughly 56 million kilowatt-hours of electricity and earns roughly $3.5 million in revenue from energy and capacity sales. After debt payments and operating expenses, approximately $1.3 million is available to rehabilitate state-owned dams. A statutory appropriation of $500,000 per biennium is also available to fund emergency repairs and maintain an emergency repairs fund.

Hydropower earnings totaling approximately $167,000 are used for the annual partial repayment of the no-interest loan that the State received from the Northern Cheyenne Tribe for the Tongue River Dam Rehabilitation Project. DNRC received spending authority for up to $3.1 million of hydropower earnings for the FY 2002-2003 biennium for the rehabilitation of Bair and Nevada Creek Dams, and $1 million for FY 2004 for the rehabilitation of Nevada Creek-Phase II.

Generally, Missouri River flows at Toston Dam from July 2002 through June 2003 were below average. Annual maintenance was performed in August 2002, requiring about 160 hours of downtime. In June 2003, due to a high snowpack and above average temperatures, the spring runoff peak was well above average, but the plant maintained operation without shutdowns because of the effectiveness of the new trash rake machine and 24-hour manned operation. For the remainder of the year, downtime was minimal. Statistics concerning the Broadwater Power Project during FY 2003 are shown in Table 34.

Table 34
Broadwater-Missouri Power Project in FY 2003

Operating availability		98 %
Gross energy generation	46,527,891	kilowatt-hours
Gross revenue from sales		$2,968,041
Investment income		$51,428
Operating costs		($397,110)
Bond payments		($2,018,078)
NET REVENUE		$604,281

Improvements to the PLC-based automated control system are ongoing in a continued commitment to manage reservoir and tailwater levels better. The new trash rake machine is performing exceptionally well and has increased the plant's overall efficiency. As a result, the facility is generating at a higher power level for a given river flow, thereby increasing revenues from power sales. The machine has a useful life of 20 years or more, and the department should realize a payback on its investment in 5 to 7 years.

Water Management

The Water Management Bureau (WMB) provides educational, technical, and other types of support in (1) solving statewide water resource issues and policy concerns, (2) protecting Montana's interests in regional and international river basins, and (3) helping local watershed and user groups solve water management issues and problems. WMB also provides technical support to other DNRC bureaus, the Reserved Water Rights Compact Commission, and water user groups.

Watershed Management

In FY 2003, WMB staff assisted water users in 14 watersheds. Following are descriptions of examples of WMB activities.

Big Hole River

WMB provided technical support to the Big Hole Watershed Committee. Staff gathered synoptic streamflow information for the fifth consecutive year to help committee members understand the effects that irrigation has on river flows and to monitor implementation of the local drought plan. The study is being completed in cooperation with the Montana Bureau of Mines and Geology (MBMG). Staff continue to study conveyance efficiencies in the stream reaches that are critical for grayling survival and in a number of irrigation ditches.

Bitterroot River

WMB continues to serve on the board and gives staff support to the Bitter Root Water Forum. Staff provided the forum with funds to develop and implement a drought mitigation plan on tributaries of the Bitterroot, helped the forum obtain 501(c)3 status as a tax-exempt foundation, and continued to investigate flow problems in Threemile Creek, a tributary of the Bitterroot River, to better understand water use and how to improve water use efficiency. Staff, along with BOR and DFWP, have automated a number of diversion gates, fish screens, and by-pass siphons on Skalkaho Creek. Staff are also trying to coordinate discussions and actions between the forum, Tri-State Water Quality Council, Lolo Watershed Group, and DEQ on the Bitterroot total maximum daily load (TMDL) process.

Blackfoot River

WMB helped the Blackfoot Challenge and more than 80 local irrigators implement a drought mitigation plan for the Blackfoot and Clearwater rivers in the dry summer of 2002. Staff also helped write a long-term water conservation plan. A number of stream gages were re-established and monitored throughout the year. Staff also provided technical assistance on the headwater water quality project and are assisting landowners and FWS to develop and implement water savings projects on Kleinshmidt Flats and on other basin ranchlands.

Boulder River

Working with local water users and the Boulder Watershed Group, WMB started irrigation efficiency and water supply assessments of the drainage basin. Staff established six stream-gaging stations and mapped all irrigated lands in the basin by system type, using aerial photos and GIS.

Clark Fork River

WMB worked closely with the Montana Consensus Council to implement MCA 85-2-350. Under this law, enacted in 2001, the Clark Fork River Basin Task Force is preparing a water management plan for the entire Clark Fork and Flathead basins. Staff have been assisting the task force in developing the plan by conducting relevant research and by providing flow, water use, water rights, and water law information to the task force.

WMB provided staff support to the Upper Clark Fork Steering Committee. The steering committee has been working on water problems in the upper Clark Fork above the confluence with the Blackfoot River. In addition to providing general technical support, staff continued working on dewatering, drought mitigation

actions, and Georgetown Lake levels and releases. Staff are conducting a seepage loss and conveyance efficiency study on the main irrigation ditches on Race Track Creek for local water users. WMB and the Montana Water Court have been helping the steering committee to investigate and evaluate the Montana adjudication process, enforceable decrees, and the long-term implications on future water management. WMB continued to record and prepare minutes of monthly meetings.

Flathead River

WMB served as a member of the Flathead Basin Commission. WMB continues to assist with implementation of the approved TMDL plan for Flathead Lake and is assisting new efforts for developing TMDLs for the Whitefish and Stillwater rivers. Staff also provided technical and financial assistance to implement a wetland/ riparian restoration project on Ashley Creek and to conduct the Ashley Creek "Know Your Watershed" Workshop in May. WMB is also participating on the basin-wide water quantity and quality monitoring committee and is funding a number of the stream gages.

Milk River

WMB and the Glasgow Regional Office are working with BOR, local irrigation districts, and other users to solve water management and distribution concerns within the Milk River basin. A five-year grant has been received from BOR to help the eight irrigation districts (organized into three divisions) learn about water conservation practices and to assist the local irrigation districts in developing water conservation plans.

Four quarterly *Milk River Watershed* newsletters were published and mailed to more than 1,200 water users in the Milk River basin. WMB and the Glasgow Regional Office obtained the articles, and WMB staff edited, published, and mailed the newsletter.

WMB continued to provide staff support to the Milk River International Alliance, which is a grassroots organization of water users from Montana, Alberta, and Saskatchewan and local, state, and federal governmental officials. WMB provided administrative, facilitative, financial, and technical support to the group.

Missouri River

WMB continues to serve on a technical committee to assist with implementing conditions defined in PPL Montana's Federal Energy Regulatory Commission (FERC) license for the Madison and Missouri river hydropower projects.

Nevada Creek

WMB is working with local water users and the Blackfoot Challenge to begin a study of water efficiency and water quality in the watershed, including a TMDL assessment.

Ruby River

To assess dewatering problems, WMB maintains flow-rating curves current at eight streamflow sites. One of these sites has a continuous recording gage. WMB meets annually with the Ruby River Reservoir Task Force to discuss river and reservoir operations.

Shields River

WMB developed a water budget for the largest irrigation canal system in the basin and with the local water users discussed canal operations during the 2002 irrigation season and the distribution of water. Staff installed four water-measuring flumes on irrigation ditches and continue to operate river flow and canal monitoring stations with the help of the local watershed coordinator. WMB monitors flows at 14 stations, including 5 that have continuous recording instrumentation.

Sun River

WMB continued to operate and collect data from five streamflow and one canal monitoring site; gages are located on Elk Creek, Mill Coulee, and Duck Creek. A staff member was appointed chair of the Sun River Flow Committee, which will be looking at the best ways to meet water needs for all types of uses in the drainage.

Tenmile Creek

WMB continued to provide staff support and facilitation to the Upper Tenmile Watershed Steering Group. The group works on issues related to streamflows, riparian habitat, water quality, and Superfund cleanup. In 2003, WMB wrote one grant application to coordinate and complete the fifth riparian restoration project, in which more than 5,000 trees and shrubs were planted in the riparian corridor, with labor provided by the Montana Conservation Corps. To date, more than 25,000 trees and shrubs have been planted in the river corridor.

Yellowstone River

WMB continued to work with both the Governor's Upper Yellowstone River Task Force and the Yellowstone River Conservation District Council.

For the task force, WMB staff completed a geomorphic analysis of the upper Yellowstone River under contract to Park Conservation District. Final report submittal was July 15, 2003. Ongoing work continues assisting the task force, Park CD, Park County, and the City of Livingston with recommendation implementation, monitoring, and cumulative effects assessment.

Staff work for the council consisted of serving on the council's technical advisory committee responsible for scientific work plan development and providing support and assistance to the council's coordinator. Related work includes helping Dawson, Yellowstone, and Stillwater Counties develop and implement work plans for floodplain management using grants that were awarded by the 2003 Legislature.

Protection of Montana's Water

DNRC has statutory responsibility to protect Montana's water resources in interstate and international water allocation and management proceedings and decisions. Following is a description of DNRC activities during FY 2003.

Columbia River

WMB continued to provide technical information and advice on issues associated with the operation of the Columbia River basin and the effects of federal decisions within Montana.

Lower Missouri River

WMB represented Montana on the Missouri River Basin Association's technical committee that reviews and recommends options for the annual operation of the Missouri River main stem system. Staff analyzed impacts and provided comments to COE on the effects on the lower Missouri River of the proposed mini-test flow releases from Fort Peck Reservoir and other proposed changes by COE. Staff also assisted lower basin water users with the relocation of pump sites that could be impacted by high spring releases from Fort Peck Reservoir.

Milk River

WMB staff met twice with Alberta Environment, Saskatchewan Water Corporation, Environment Canada, the U.S. Geological Survey (USGS), and BOR on the operations of the Milk River and its tributaries. Issues addressed include water quality and ways to improve the accuracy of the international apportionment, specifically between the western and eastern crossing of the Milk River in Alberta. Staff also participated on the Montana/Alberta Advisory Council.

With assistance from WMB, Governor Martz asked the International Joint Commission to evaluate its 1921 Order to determine whether it is meeting the terms of the 1908 Boundary Waters Treaty for apportioning the flows of the St. Mary and Milk rivers and tributaries. WMB is working closely with the International Joint Commission, Alberta officials, local water users, and both federal governments to begin the discussions. The staff is also coordinating the State's evaluation of a storage project on the Milk River that is being proposed by Alberta.

North Fork of the Flathead River

WMB coordinated meetings between British Columbia and the Flathead Basin Commission regarding the creation of an agreement between Montana and British Columbia. Over the course of the year, the Premier of British Columbia and Governor Martz have agreed to the content of the agreement. The agreement will set up a framework to resolve conflicts and to improve cooperation on the management of resources that Montana shares with British Columbia.

Poplar River

WMB continued to coordinate with Saskatchewan Water Corporation regarding the annual release of water from Cookson Reservoir into the East Fork of the Poplar River, in accordance with the International Joint Commission's recommended apportionment. Staff worked with USGS to ensure that Montana receives its rightful share.

Yellowstone River

Working with local water users, WMB wrote and testified on House Joint Resolution 35. The resolution directs the Legislative Council to designate an interim committee to initiate a study to determine how the Yellowstone River Compact can more effectively protect Montana's water users on the four interstate tributaries of the Yellowstone that are shared with Wyoming. The resolution passed, and the staff will be assisting with the study. WMB is also assisting the Tongue and Yellowstone Canal water users by maintaining a real-time gaging station on the canal.

Protection and Use of Montana's Groundwater

This section presents examples of WMB's groundwater protection and use activities that occurred in FY 2003.

WMB continued to chair the Technical Advisory Committee for the Powder River Basin Controlled Groundwater Area in southeastern Montana. The Technical Advisory Committee oversees monitoring and the collection of baseline data as part of the controlled groundwater area. Staff also worked with a group of federal and state agencies that prepared a programmatic EIS on the potential effects of coal bed methane gas development on water quality, existing water rights, and aquifers in the basin.

WMB continued to work with the water resources regional offices in reviewing and analyzing numerous and complex groundwater right applications, water right complaints, and petitions for setting up controlled groundwater areas, and to assist with the monitoring of groundwater within the Yellowstone National Park Controlled Groundwater Area. A WMB staff person continued to chair the Yellowstone National Park Technical Oversight Committee and is a member of the Groundwater Assessment Steering Committee.

Water Resource Education

WMB provides water resource education to water users and other water interests across the state. The goal is to provide citizens with the tools and knowledge to solve their own watershed and water resource problems. WMB staff at the Montana Watercourse supervised the multiple activities of three full-time water education specialists at Montana State University: the Project WET Montana coordinator, the Montana volunteer water monitoring coordinator, and the Montana wetlands education coordinator. Specific activities in FY 2003 include the following.

Staff of the Montana Watercourse facilitated a steering committee that designed and carried out a "Know Your Watershed" Workshop for the Ashley Creek watershed. Staff also designed and carried out four wetland stewardship workshops and two wetland and riparian planning and protection workshops across the state. Staff also conducted eight WET (Water Education for Teachers) workshops for teachers designed to help them better teach students about water, rivers, streams, and Montana's water resources. Staff also conducted watershed tours in the Blackfoot and Clark Fork drainages for teachers. Watercourse staff assisted other WMB staff in conducting a water commissioner training workshop in Bozeman. Staff drafted and completed a *Wetland Planning and Protection Guide* for Montana citizens and agricultural users.

The Montana Watercourse director restructured the positions within the Montana Watercourse, hired three new staff, and raised more than $270,000 in grant funds.

WMB staff were actively involved with the Montana Watershed Coordination Council. WMB staff also participated in a number of its work groups: the Agenda Committee, Watershed Recognition Work Group, Retreat Work Group, Water Activities Work Group, and Montana Watershed Symposium Work Group.

Improvement of Statewide Water Management

Drought Mitigation

Montana entered its fourth consecutive year of drought. WMB supported and coordinated activities of the Governor's Drought Advisory Committee, members of which are listed below. Last year, the drought committee held meetings almost monthly. The *2003 Drought Status Report* was prepared and submitted to the governor in June. WMB supports and works closely with Lt. Governor Ohs, who is the chair of the committee. The committee is responsible for implementing the *Montana Drought Response Plan*. The *2003 Drought Status Report* describes the potential for drought and different response actions, if appropriate, at the state and local level. Staff spent considerable time helping local water users and groups mitigate drought impacts. Staff also participated in drafting the National Drought Preparedness Act of 2003, which was introduced in Congress in July.

Montana Drought Advisory Committee	
Karl Ohs	Chair, Lt. Governor
Betsy Allen[1]	Senator Burns' Office
Wayne Berkas[1]	U.S. Geological Survey
Stan Bradshaw[1]	Trout Unlimited
Marc Bridges	Montana Department of Livestock
Jay Bodner[1]	Montana Stockgrowers Association
Sarah Carlson[1]	Montana Association of Conservation Districts
Carol Crockett	Montana Department of Commerce
Ed Diemert[1]	Montana Association of Counties
Tim Felchle[1]	U.S. Bureau of Reclamation
Larry Gruel[1]	Pennsylvania Power and Light
Roy Kaiser[1]	U.S. Natural Resources Conservation Service
Gina Loss[1]	National Weather Service
Dan McGowan	Disaster and Emergency Services
Jim Melstad	Montana Department of Environmental Quality
Mike Murphy[1]	Montana Water Resources Association
Ray Nelson[1]	Northern Rockies Fire Coordination Center
Peggy Stringer[1]	Montana Agricultural Statistics
Jack Stults	Montana Department of Natural Resources and Conservation
Kathleen Williams	Montana Department of Fish, Wildlife and Parks
Ron Zellar	Montana Department of Agriculture

1. Non-voting member

WMB prepared and distributed monthly water supply and moisture condition reports to local, state, and federal governments; statewide news media; and other interested parties. In addition, the severe drought conditions that prevailed over the state in the winter, spring, and early summer of 2003 caused the staff to continually disseminate information and news releases about drought conditions and ways to mitigate drought impacts.

Water Resource Reference Guide

WMB, in cooperation with USGS, is continuing to prepare the *Water Resource Reference Document for the Year 2000*. The document describes the changes in water use and water supply throughout the last century and during the year 2000. This document should benefit water managers, water professionals, and teachers in the 21st century.

Integration of Water Quality and Quantity

WMB continued to work on integration of water quality and quantity by reviewing nonpoint pollution discharge permits and participating in DEQ's assessment of priority streams for listing as water-quality-impaired. WMB also participates on the Water Pollution Control Advisory Board and on the Water Activities Committee, which advise DEQ on its Nonpoint Discharge Elimination System Program.

Water Commissioner Training

Staff conducted water commissioner training in Bozeman and periodically helped individual water commissioners.

Other Water Management Activities

WMB continued to assess the effects of deregulation on the operation of the Toston hydropower facility and offers for the purchase of the Power Purchase Agreement with NorthWestern Energy. Staff reviewed the feasibility of hydropower development at state-owned storage projects.

WMB completed a controversial environmental assessment on the cumulative impacts of a number of permit applications in the Smith River basin.

WMB staff continued to lay out and publish the Water Resources Division's newsletter, the *Milk River Watershed* newsletter, flyers, and other documents of the division, as well as design and update the web page for the Water Resources Division.

Water Operations

The Water Operations Bureau administers the Dam Safety, Floodplain, and Water Measurement Programs and provides staff support for the Board of Water Well Contractors.

Dam Safety Program

The primary purpose of the Dam Safety Program is to ensure that dams that have the potential to cause loss of life downstream, if they fail, are properly constructed, maintained, and operated. An operation permit is issued for high hazard dams that have been found to be safe. Currently, 88 dams in the state are permitted, high hazard dams. Four additional high hazard dams are expected to be permitted. The Dam Safety Program regulates an additional 2,871 low and significant hazard dams. These dams do not require a permit.

Permitting of High Hazard Dams

To obtain or renew an operation permit, the high hazard dam owner must review and update the dam's emergency action, operation, and maintenance procedures and have an inspection conducted by a professional engineer. Often, conditions placed on an operation permit require that certain dam deficiencies be addressed. Failure to meet the conditions of an operation permit can result in a restriction on the reservoir level and/or a fine. The Dam Safety Program issued nine operation permits in Fiscal Year 2003.

Any construction on a dam that could potentially be a threat to the dam's integrity requires a construction permit. The permit application must be accompanied by design plans and specifications that are put together by a professional engineer. The following dams had active construction permits for Fiscal Year 2003.

- South Hills Storm Water Retention Ponds (Missoula County)
- Nevada Creek Dam (Powell County)
- Bair Dam (Meagher County)
- Little Sleeping Child Creek Dam (Ravalli County)
- Lake Frances North Dam (Pondera County)
- Dry Fork Dam (Blaine County)
- Crazy Mountain Dam (Park County)

When a new dam is constructed or an existing dam repaired, the owner is required to apply for a hazard classification. A hazard classification is a determination of the potential for loss of life to occur downstream due to dam failure. In FY 2003, 12 hazard analyses were completed.

Public Awareness/Education

During this fiscal year, the Dam Safety Program sponsored a workshop for engineers and geologists in cooperation with the U. S. Bureau of Reclamation. Approximately 100 people from all parts of the state attended. The main focus was on drilling in embankment dams. The reviews were outstanding; everyone seemed to get a lot of valuable information from the presentations.

Emergency Action Plan Update and Testing

State law requires that emergency action plans (EAPs) be updated on an annual basis for all high hazard dams. In addition, tests of the plans should be completed frequently. To accomplish these goals, an emergency action plan coordinator works with dam owners to ensure that EAPs are up-to-date and regularly tested. This position is funded using only federal grant monies.

For FY 2003, 15 plans were reviewed, 5 tabletop exercises were conducted, and 14 dam owners were provided assistance with updates. Plans are under way to test several additional dam emergency action plans in Fiscal Year 2004.

Several benefits result from testing the plans. County officials learn about the intricacies of dams and develop a working relationship with dam owners. Testing the plan forces the dam owner to evaluate the adequacy of emergency repair materials, examine access and evacuation routes to and from the dam, and think about potential downstream hazards. The public benefits by having increased owner awareness and well-developed emergency plans.

Emergency Action Plan Evacuation Maps

Most of the inundation maps contained in EAPs for high hazard dams are copies of USGS quadrangle maps. Some of these maps are hard to read. In an effort to improve the quality of the maps, the Dam Safety Program is in the process of taking aerial photos. Aerial photos provide much better detail. They are also easier for county officials to use because they can recognize landmarks on an aerial photo more readily than on a topographic map.

The objective of the program is to revise EAP maps, using aerial photography as an aid to illustrate and identify downstream hazards. Four inundation areas were flown in FY 2003. Plans are in place to complete five additional areas in September 2003, depending on the availability of pilots and the severity of the fire season. The goal is to eventually put all of the inundation maps for the state's high hazard dams that DNRC regulates in more usable digital format. This program is in its fourth year and will be continued indefinitely.

Summer Engineering Project Aides

During the summer, the water resources regional offices located throughout the state are responsible for maintenance inspections, measurement of monitoring devices, and downstream hazard evaluations. Six students were hired from May through August 2002 to assist the regional engineers. All salaries and operating expenses were funded with federal grants. These students worked closely with the regional engineers, primarily helping dam owners to conduct their annual owners' inspections. The students also evaluated drain flows and piezometric data on several state-owned dams and helped collect survey data.

Earthquake Ground-Shaking Map Development

Earthquakes are capable of causing great damage to dams. Montana is one of the most seismically active states in the country and potentially could have a large earthquake of magnitude 7 or greater. Therefore, it is necessary to evaluate dams to see how resistant they are to damage and failure from ground shaking. In order to do this, one must have an idea of what magnitude earthquake could occur in the area near the dam.

To provide engineers with accurate data to assess the ground-shaking potential near a dam or other structure, DNRC requested funding from the Federal Emergency Management Agency (FEMA) to develop detailed ground-shaking maps specific to Montana. DNRC then contracted with a corporation that is one of the world leaders in seismic hazard analysis to develop the maps. Assisting with the project are representatives from the Montana Bureau of Mines and Geology, Montana Tech of the University of Montana, the U.S. Bureau of Reclamation, Montana State University, and FEMA.

It is anticipated that the maps will be made available in the fall of 2003. A training seminar will be conducted on proper use of the maps. The maps will be of value for analyzing not only dams, but also buildings, landfills, interstate bridges, and any other structure that could be adversely affected by an earthquake.

Board of Water Well Contractors

The Board of Water Well Contractors is responsible for licensing water well drillers, water well contractors, and monitoring well constructors. The board, which is attached to DNRC for administrative purposes, establishes minimum water well and monitoring well construction standards and enforcement and training procedures. Composed of five members, the board consists of one technical advisor/ hydrogeologist appointed by MBMG, two licensed Montana water well contractors appointed by the governor, one member appointed by the DNRC director, and one member appointed by the DEQ director. Each member serves a three-year term. Current board members are:

Pat Byrne, Chair
Great Falls
Water Well Contractor

Laurence Siroky, Vice-Chair
Helena
DNRC

Robert N. Bergantino
Butte
MBMG

Eric Regensburger
Helena
DEQ

Kevin Haggerty
Bozeman
Water Well Contractor

Licensing

During FY 2003, 280 people were licensed in three categories: water well contractors, monitoring well constructors, and water well drillers. Twenty-four of these were new licensees. Eleven former licensees did not renew their licenses.

Complaints and Investigations

This year, 29 complaints were received out of 200 initial inquiries. Fourteen of the complaints were investigated for violations. Five faulty wells were repaired by the licensees without board action. One contractor's bond was used to repair a faulty well.

Public Awareness/Education

The Board of Water Well Contractors and the Montana Environmental Training Center held 12 continuing education classes and approved three programs by suppliers and manufacturers for continuing education credit. The board conducted one class for drillers.

A newsletter, *Well Developments*, is published and distributed to license holders and other interested persons.

Floodplain Management

The Floodplain Management Section is responsible for the oversight of 125 locally administered floodplain management programs throughout Montana.

The primary goal of the program is to reduce the loss of life and structural property through wise floodplain development. The secondary goals are to reduce the loss of functional floodplains and reduce the amount of erosion of stream banks due to unwise floodplain development. Budget cuts once again have reduced the staff of the floodplain program, resulting in reduced ability to assist local governments in managing a very complex program that benefits all citizens of the state.

Flood Mitigation Assistance Program

The primary purpose of this program is to relocate structures out of the 100-year floodplain. The secondary purpose is to elevate structures to 2 feet above the base flood elevation. Structural projects will be greatly limited based upon the type of project, location, and a cost/benefit comparison with other alternatives. In FY 2003, the City of Lewistown and Sweet Grass County completed flood mitigation plans in order to be eligible to construct flood mitigation measures to reduce flood insurance claims.

State Floodplain and Community Assistance Program

General technical and engineering assistance was given to local and state governments, private property owners, and engineering consulting firms. During FY 2003, the Floodplain Management Program sent out approximately 165 written responses to floodplain issues and concerns. Also, approximately 1,135 phone contacts and 1,725 e-mails were responded to during the fiscal year. Of that total, 45 percent provided technical assistance, and 6 percent required follow-up. Numerous violations have been addressed this past year, and most were remedied without legal activity.

Floodplain Study Program

Floodplain management studies are ongoing in Gallatin, Lewis and Clark, Missoula, and Yellowstone Counties. Also, the floodplain program is working closely with the U.S. Army Corps of Engineers on flood studies in Glendive, Miles City, and Libby.

The Floodplain Management Program signed an agreement with FEMA to become a “Cooperating Technical Partner” for FY 2003 and will receive approximately $45,000 to conduct studies in Gallatin County.

FEMA initiated a new program, the Map Modernization Implementation Program, in Montana last year. The first step of the program was to collect a detailed inventory of all flood maps in the state and prioritize them with regard to the need for restudy. Also, high priority, unmapped floodplains were identified. A statewide mapping plan will be developed, which will be used to request funding from FEMA to conduct flood studies throughout the state. FEMA is hopeful that Congress will pass a bill that would provide up to $150 million nationwide for the national mapping initiative.

Public Awareness/Education

Staff provided support to the Upper Yellowstone Task Force. Detailed floodplain maps of the Yellowstone River for the City of Livingston were updated, and new maps were developed for the Yellowstone River from Mission Creek to Gardiner.

The Association of Montana Floodplain Managers held its fourth annual conference in Lewistown, attended by approximately 55 people. The conference was a success and included people from numerous professions. The DNRC program manager was elected executive director of the association for the next year.

Water Measurement Program

The purpose of the Water Measurement Program is to provide technical information and assistance in the measurement of surface water diversions. The program focuses on streams where dewatering causes conflicts between water users or impacts resources. Program staff continue to investigate streams for program inclusion. The program also analyzes the effectiveness of drought response actions and presents the results to various watershed groups and organizations.

Big Hole River

The Water Measurement Program continues to represent DNRC at watershed committee meetings and to provide snowpack and streamflow data to the committee. The Drought Management Plan devised by the committee will be implemented again this year because of low flows.

Burnt Fork

The Burnt Fork is a Bitterroot River tributary near Stevensville. The Water Measurement Program was contacted this spring to develop a new rating table for the Burnt Fork gaging station. This was last done in 1986, and the old table had considerable error. As of July, a new rating table has been developed and is currently in use by the various water user groups on the Burnt Fork.

Georgetown Lake

The Water Measurement Program has been working with various groups that have conflicting interests in Georgetown Lake water and lake management. The program has modified the Georgetown Lake model so that Granite County may easily use it to operate the dam more efficiently. The program has installed continuous recorders on the lake and on major tributaries, continues to provide model projections to Granite County and to homeowners on the lake, and continues to research the hydrology of the basin so that the lake may be managed more objectively.

Jefferson River

The Water Measurement Program continues to work with the Jefferson River Watershed Council. The Water Measurement Program and DFWP drafted a Drought Management Plan that was used during the last three summers and will likely be used again this summer.

The Water Measurement Program continues to analyze and disperse the information from recording stream gages that it installed at the Waterloo Bridge (Jefferson River), High Road Bridge (Big Hole River), and mouth of the Beaverhead River. The program continues to measure irrigation diversions and is conducting a seepage study of the Parrot Canal and Creeklyn Ditch, which serve the largest, most senior water users in the system.

Program staff continue to take weekly readings of river gages and irrigation diversions and present them at weekly drought response meetings of the major water users.

Musselshell River

Installation of measuring devices continues on Musselshell River diversions. Several water development grant applications were received requesting partial reimbursement for installation of headgates and measuring devices. The Lewistown Regional Office is assisting with these efforts.

Rock Creek

Rock Creek is a tributary to the Big Hole River near Glen. There is considerable conflict between users during low water years. The Water Measurement Program has responded to this situation by installing and rating measuring devices on irrigation diversions and on Rock Creek at its mouth and at its entrance to the valley. Releases from the upper reservoir are monitored so that water may be more effectively allocated.

Water Rights

The mission of the Water Rights Bureau is to ensure the orderly appropriation and beneficial use of Montana's waters. The two main programs are (1) adjudication, where the bureau assists the Water Court in identifying and evaluating pre-1973 water uses, and (2) new appropriations, which involve the administration and regulation of post-1973 water rights in Montana. In addition to operating the two programs, the Water Rights Bureau is directed by the Montana Constitution to maintain a centralized water right record system.

Water Right Records

The two types of records most accessed by the public and the staff are in microfiche and electronic formats. With the water right database accessible on the Internet, the electronic records are becoming the most popular.

Efforts continue to enhance the wide variety of water right information, forms, and data now available on the Internet at:

www.dnrc.state.mt.us/wrd/home.htm

For geographic representation of water rights data, go to the Natural Resource Information System (NRIS) site at:

www.nris.state.mt.us/apps/dnrc2002/waterrightmain.asp

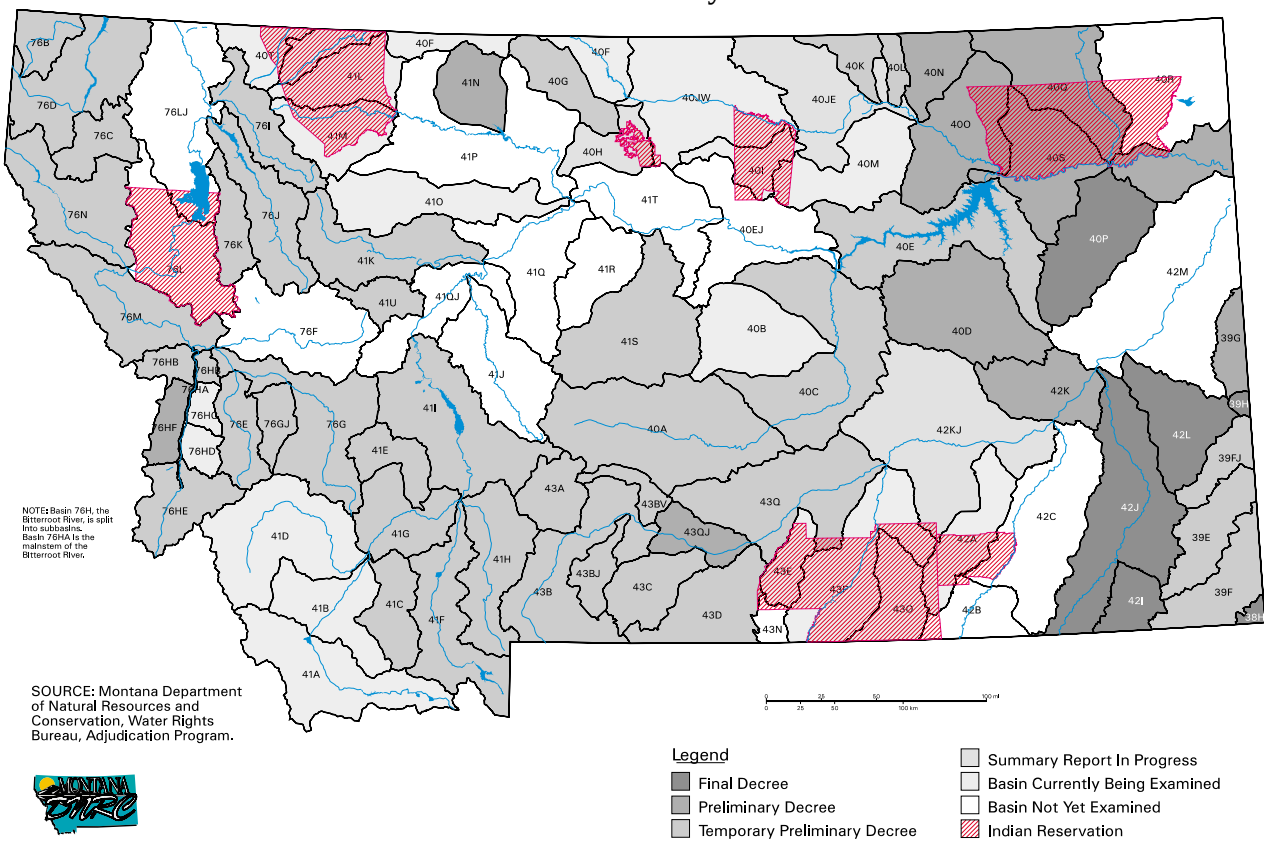
The redesign of the water rights database will improve flexibility in information gathering and report generation, increase mapping capabilities, and improve customer access and service.

Adjudication

During FY 2003, 2,241 claims were examined in five of the eight Water Resources Division regional offices. Staff in these offices also provided post-decree assistance to the Water Court. Regional office staff joined the court in working with hundreds of citizens to resolve issues and disputes on pre-1973 water use claims. Central and regional office staff were also involved in issuing DNRC's summary report to the Water Court for the Yellowstone River between the Big Horn River and the Tongue River basin (42KJ).

Figure 32 shows the status of the adjudication in Montana's basins. The Water Court issued a Preliminary Decree in January 2003 for Big Sandy Creek (basin 40H).

Figure 32
Montana General Adjudication
Status as of January 2003



Staff from the Central office, Bozeman Regional Office, Water Court, and 18th Judicial District Court worked together to enforce the Water Court's West Gallatin River Temporary Preliminary Decree (basin 41H) and a portion of the Water Court's Temporary Preliminary Decree on Hyalite and South Cottonwood creeks. Staff from the Central Office, Lewistown Regional Office, Water Court, and 14th Judicial District Court worked together to enforce the Water Court's Temporary Preliminary Decrees (basins 40A & 40C) on over 200 miles of the Musselshell River. Staff from the Central Office, Billings Regional Office, Water Court, and 6th Judicial District Court worked together to enforce the Water Court's Temporary Preliminary Decree on Sweet Grass and Cayuse creeks (basin 43BV).

New Appropriations

Applications for various types of water rights are received each year. Table 35 shows the number and types of applications and notices received and processed during FY 2003. These water right applications vary in complexity depending on each region's water supply, area-specific competition for water, and the specific project request. Staff in the division's eight regional offices process these applications.

Table 35
Water Right Applications in Fiscal Year 2003

	Received	Processed
Permits	294	212
Changes	117	96
Groundwater certificates	2,758	2,561
Water right ownership updates	4,294	4,980
Exempt water rights	251	163
Extensions	58	56
Stockwater permits	139	137
Project completion certifications	101	947

The backlog on these applications, and the time it takes to process them, are growing in most regions of Montana. The number of ownership updates and groundwater certificates has increased in recent years because of improved compliance with the law, which requires that ownership updates be part of the realty transfer certificates that must be filed with the county for every realty transfer in the state. The level of scrutiny given to permit and change applications has increased due to greater public concerns for environmental review, basin closures, groundwater-surface water connectivity, drought, the complexity of dealing with limits to water availability, and the need to avoid adverse effects. At the same time, the number of people and amount of funding available to work on these applications have remained stable or decreased because of hiring freezes and other fiscal considerations.

When applicants and objectors are unable to settle their differences, the file moves into the hearings process. During FY 2003, 26 hearings were held. In general, permit and change applications continue to be more complex and contentious. Hearings are now being scheduled at least a year from the receipt of objections. The Water Rights Bureau is examining ways to contract with private entities to provide additional hearings services, if an applicant is willing to cover the expense.

Two controlled groundwater areas were established, one in the North Hills of the Helena Valley, and the other at the Somers Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site. Petitions are pending at several additional sites across Montana.

Regional Offices

The primary function of the division's eight regional offices is to work directly with the public in implementing programs for which the division is responsible. The regional offices play a large role in the accomplishments already discussed in this report concerning the division's programs. Additional special projects are highlighted here.

Billings

The prospect for coal bed methane development has brought forth a great deal of concern for and interest in water rights in southeastern Montana. The Billings Regional Office is working cooperatively with groups, corporations, and individuals to provide education on water right laws and their relationship to the methane development process. The office has worked on permitting beneficial uses for methane development water, investigated water use complaints, and evaluated the safety of dams for storing coal bed methane waters. The office will continue to work with water users during this period of uncertainty and change.

Flowing near Big Timber, Sweet Grass Creek provides water for thousands of acres of irrigated farmland. Area farmers and ranchers had become increasingly frustrated with the lack of organized distribution of this important resource. The Billings Regional Office responded by assisting the water users and the Water Court in instituting and training a water commissioner, installing water measurement devices, mapping diversion points, resolving outstanding water right issues, and developing a decree enforceable by the courts. While shortages continue, citizens are reassured that water is being distributed as prescribed by law.

Bozeman

The issue of enforcement of pond water rights is an increasing concern with area water users. Several high-capacity well applications in the West Gallatin River alluvium have stimulated interest in the topic of surface water/groundwater interaction. The Bozeman office is providing support to the District Court and the Water Court for water right enforcement projects on the West Gallatin River, Middle Creek, and South Cottonwood Creek.

Glasgow

Glasgow Regional Office staff provided expertise to the development and implementation of the new Oracle-based Water Rights Database Project. Staff helped five eastern Montana conservation districts to develop and process changes to their reserved water rights. Under a BOR and DNRC cooperative agreement, Glasgow staff continue to help the Milk River Project irrigation districts and the Joint Board of Control with water conservation planning as part of a joint effort. Increased water measurement under the water conservation plans was instrumental in providing an equitable distribution and allocation of water during recent drought conditions. Glasgow staff have provided technical and planning assistance on the feasibility study of the North Central Montana Regional Water System, and to all basin water users, for long-term, broad-based solutions to frequent water shortages and failing infrastructure.

Havre

Havre Regional Office staff continue providing considerable cooperative technical assistance to the Milk River Technical Working Group, Eastern Tributaries Working Group, and Milk River Joint Board of Control for the eight irrigation districts that make up the Milk River Irrigation Project. In cooperation with county commissioners, conservation districts, BOR, USGS, Canadian Saskatchewan Water, the Prairie Farm Rehabilitation Administration, Water Survey Canada, and all water users, the Havre Regional Office staff worked effectively to reduce waste and improve equitable water delivery to mitigate the negative effects of the drought. Havre staff have contributed substantially to reducing the backlog of verifying complete water use permits and change authorizations.

Helena

The Helena Regional Office is assisting with the spillway construction oversight at Nevada Creek Dam. During the spring, the bid was let, and pre-construction meetings were held with the contractor. Construction has just begun, and scheduling and material and procedure submittals are the first priorities. The majority of the construction will occur in the fall and winter of 2003.

A DNRC Order was issued on October 11, 2002, designating the 52-square-mile North Hills Temporary Controlled Groundwater Area (NHCGA) in the north Helena valley. The Helena Regional Office has received 54 permit applications for new wells and 14 change applications for replacement wells since the effective date of the order. Staff issued 50 licenses to drill and test. The Helena office disseminates application, well log, and water quality sample information to the Lewis and Clark County Water Quality Protection District and MBMG for inclusion in the North Hills database. Assistance is also provided in gathering well cutting samples and static water levels for the NHCGA study.

Kalispell

The DNRC Reserved Water Rights Compact Commission continues to work on the negotiation of the Confederated Salish and Kootenai Tribes' water right. The Kalispell office is attending the negotiating sessions and participates in the Administration Work Group. The compact commission and the Tribes have also initiated a new project to have the department begin examination of claims in the Jocko River drainage basin.

The Kalispell office has begun to see an increase in the number of new appropriations for large groundwater uses. Many of them are in direct proportion to the increase in growth in Flathead County. Several applications have also been generated as a result of a cooperative effort with the local DEQ public water supply section to identify existing subdivisions that were built before water rights were secured.

Lewistown

The Lewistown Regional Office continued providing technical assistance toward administration of the Musselshell River Enforcement Project, the largest district-court-supervised enforcement project of its kind in Montana. Hundreds of water users; approximately 60,000 irrigated acres; and more than 200 miles of river are involved in the enforcement area. Staff assisted water users, water

commissioners, the Water Court, and others with hydrological evaluation, water law, project mapping, records research, measuring device selection and location, and funding assistance.

The regional office provided construction oversight and concrete testing services on the final phase of rehabilitation of the spillway at Bair Reservoir.

Missoula

In spite of being short-staffed, the Missoula Regional Office made considerable progress in reducing the backlog of water right applications.

Contracts for delivery of water from Painted Rocks Reservoir on the West Fork of the Bitterroot River expire on September 30, 2004. Staff began negotiations for new contracts with the Painted Rocks Water Users Association and DFWP. Painted Rocks provides water essential to irrigators and for instream flow for fisheries and recreation.

Staff continued to refine GIS applications to assist in the adjudication of existing water rights in the Bitterroot and Blackfoot basins and for use with new appropriations.

Staff also provided water right orientation training sessions for realtors, consultants, lawyers, and others, with an emphasis on the acquisition of water rights information from the Internet.